



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor

Kathleen Clarke
Executive Director

Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210

PO Box 145801

Salt Lake City, Utah 84114-5801

801-538-5340

801-359-3940 (Fax)

801-538-7223 (TDD)

April 5, 1999

TO: File

THRU: Joe Helfrich, Permit Supervisor *JH*

THRU: Daron Haddock, Permit Supervisor *DH*

FROM: Robert Davidson, Soils Reclamation Specialist *RAD*

RE: As-Built, Western States Minerals, J.B. King Mine, ACT/015/002-99A, File #2,
Emery County, Utah

SUMMARY:

The "As-Built" amendment was received on 3/8/99 for reclamation work performed at the JB King site in November 1998 for resolution of NOV#N98-45-4-1. Included in the amendment are three addendums which include Addendum #1 - North Diversion Channel, Addendum #2 - Silt Fence Removal, and Addendum #3 - Husbandry Practices. The Addendum #3 - Husbandry Practices is included for updating the Mine Reclamation Plan in both section UMC 817.45, Hydraulic Balance: Sediment Control Measures, and section UMC 817.114, Revegetation: Mulching and Other Soil Stabilization Practices. This Technical Analysis covers the soils review of the Husbandry Practices.

TECHNICAL ANALYSIS:

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Under soil regulations R645-301-244, Soil Stabilization, and R645-301-357.300, Husbandry Practices, Western States Minerals performed additional reclamation enhancements on an approximate 0.67 acre parcel, located in the north-central portion of the disturbed area boundary, and directly south of the North Diversion Channel.

The "soil stabilization" and "husbandry practices" reclamation efforts were performed on a swale that is located directly south and above the north facing hillside and the north diversion ditch. This swale collects and ponds storm water runoff which ultimately flows to the north and down the hillside and into the ditch. As a result of this runoff, considerable rill and gully formation had occurred directly above the failed diversion breach (NOV#N98-45-4-1) and was likely the cause of the breached diversion ditch. During the November 1998 site work, this swale area had the ground "roughened" using a hydraulic excavator to pock or rough gouge the soil surface. After surface roughening, the area was hand broadcast seeded using the approved reclamation seed mix.

Surface roughening was used on the swale area to both enhance vegetation and help prevent excessive precipitation run-off onto adjacent slopes. The surface roughening procedure helps reduce runoff by collecting and harvesting rainwater within the deep gouged, or pocked surface. The deep gouging technique will help lessen runoff onto the adjacent north facing hillside, thereby reducing the sediment load into the north diversion ditch.

Under husbandry practices, R645-301-357.300, the following must be met:

357.324. Where weed control practices damage desirable vegetation, areas treated to control weeds may be reseeded or replanted according to the following limitations. Up to a cumulative total of 15% of a reclaimed area may be reseeded or replanted during the first 20% of the extended responsibility period without restarting the responsibility period. After the first 20% of the responsibility period, no more than 3% of the reclaimed area may be reseeded in any single year without restarting the responsibility period, and no continuous reseeded area may be larger than one acre. Furthermore, no seeding is allowed after the first 60% of the responsibility period or Phase II bond release, whichever comes first. Any seeding outside these parameters is considered to be "augmentative seeding," and will restart the extended responsibility period.

In meeting the requirements of R645-301-357.324, the following have been met:

- The 10 year bond clock was reset when site underwent significant reclamation work for the refuse pile area in 1995. Therefore, the current work performed in November 1998 is within the 60% of the responsibility period. Phase II bond release has not been granted.
- The affected acreage is 0.67 acres which accounts for 2.23 % of the affected disturbed acreage (30 acres). This accounts for less than 3% of the disturbance area after the first 20% of the responsibility period.

Findings:

The requirements of this section meets the regulatory requirements.